

## Early Head Start

Benefit-cost estimates updated August 2014. Literature review updated April 2012.

Current estimates replace old estimates. Numbers will change over time as a result of model inputs and monetization methods.

The WSIPP benefit-cost analysis examines, on an apples-to-apples basis, the monetary value of programs or policies to determine whether the benefits from the program exceed its costs. WSIPP's research approach to identifying evidence-based programs and policies has three main steps. First, we determine "what works" (and what does not work) to improve outcomes using a statistical technique called meta-analysis. Second, we calculate whether the benefits of a program exceed its costs. Third, we estimate the risk of investing in a program by testing the sensitivity of our results. For more detail on our methods, see our [technical documentation](#).

Program Description: Early Head Start is a federally funded program for low-income pregnant women and families with infants or toddlers that aims to enhance children's development and health and strengthen families. Families can receive services until the children are three years old. Early Head Start accounts for 10 percent of the Head Start budget; program providers determine the specific services offered following Head Start guidelines.

### Benefit-Cost Summary

Program benefits		Summary statistics	
Participants	\$126	Benefit to cost ratio	(\$0.16)
Taxpayers	\$3,103	Benefits minus costs	(\$12,492)
Other (1)	\$277	Probability of a positive net present value	16 %
Other (2)	(\$5,231)		
Total	(\$1,725)		
Costs	(\$10,767)		
Benefits minus cost	(\$12,492)		

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2013). The economic discount rates and other relevant parameters are described in our [technical documentation](#).

## Detailed Monetary Benefit Estimates

Source of benefits	Benefits to				
	Participants	Taxpayers	Other (1)	Other (2)	Total benefits
From primary participant					
Crime	\$0	(\$3)	(\$10)	(\$1)	(\$14)
Labor market earnings (test scores)	\$383	\$163	\$190	\$0	\$735
K-12 grade repetition	\$0	\$25	\$0	\$13	\$37
K-12 special education	\$0	\$263	\$0	\$133	\$396
Health care (disruptive behavior disorder)	\$2	\$7	\$8	\$3	\$20
Subtotals	\$385	\$454	\$188	\$148	\$1,174
From secondary participant					
Labor market earnings (major depression)	\$468	\$200	\$0	\$0	\$668
Health care (major depression)	\$23	\$72	\$89	\$36	\$219
Public assistance	(\$750)	\$2,377	\$0	\$0	\$1,627
Subtotals	(\$258)	\$2,648	\$89	\$36	\$2,515
Adjustment for deadweight cost of program	\$0	\$0	\$0	(\$5,414)	(\$5,414)
Totals	\$126	\$3,103	\$277	(\$5,231)	(\$1,725)

We created the two “other” categories to report results that do not fit neatly in the “participant” or “taxpayer” perspectives. In the “Other (1)” category we include the benefits of reductions in crime victimization and the economic spillover benefits of improvement in human capital outcomes. In the “Other (2)” category we include estimates of the net changes in the value of a statistical life and net changes in the deadweight costs of taxation.

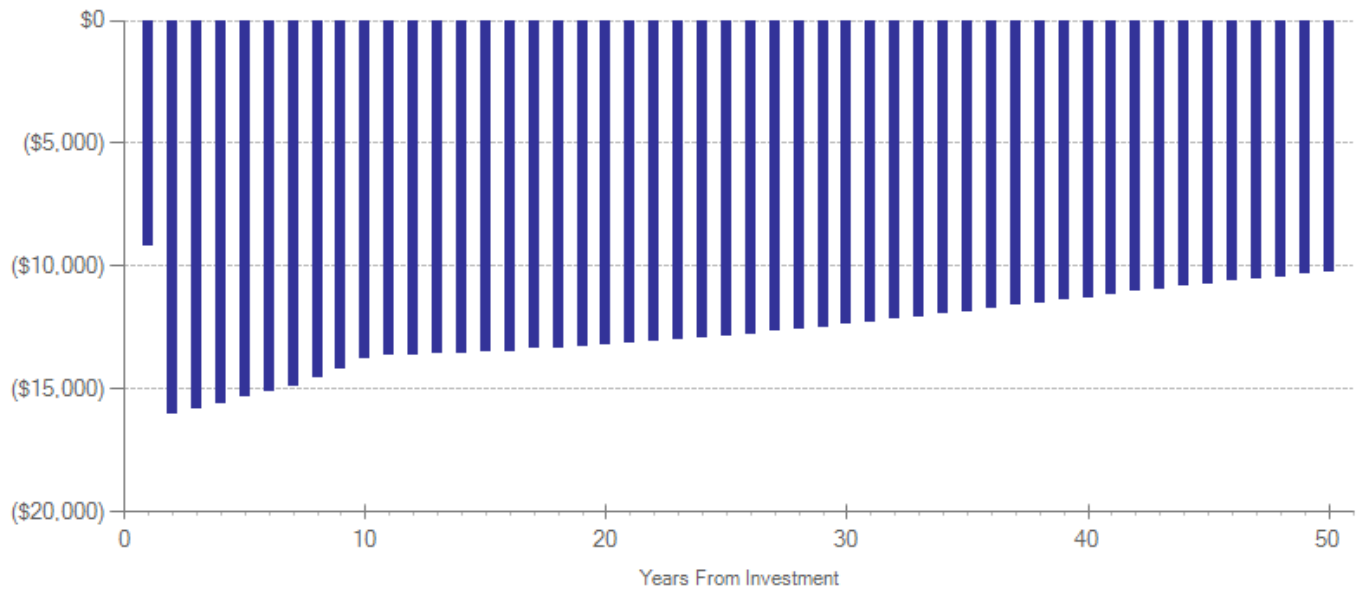
## Detailed Cost Estimates

	Annual cost	Program duration	Year dollars	Summary statistics	
Program costs	\$7,600	1.75	2010	Present value of net program costs (in 2013 dollars)	(\$10,767)
Comparison costs	\$1,679	1.75	2010	Uncertainty (+ or - %)	10 %

U.S. Department of Health and Human Services, Administration for Children & Families, <http://www.acf.hhs.gov/programs/ohs/about/fy2010.html>.

The figures shown are estimates of the costs to implement programs in Washington. The comparison group costs reflect either no treatment or treatment as usual, depending on how effect sizes were calculated in the meta analysis. The uncertainty range is used in Monte Carlo risk analysis, described in our [technical documentation](#).

### Cumulative Net Cash Flows Over Time (Non-Discounted Dollars)



### Meta-Analysis of Program Effects

Outcomes measured	Primary or secondary participant	No. of effect sizes	Unadjusted effect size (random effects model)		Adjusted effect sizes and standard errors used in the benefit-cost analysis					
					First time ES is estimated			Second time ES is estimated		
			ES	p-value	ES	SE	Age	ES	SE	Age
Internalizing symptoms	Primary	1	-0.052	0.682	-0.052	0.127	10	-0.038	0.100	12
Externalizing behavior symptoms	Primary	1	-0.038	0.766	-0.038	0.127	10	-0.018	0.066	13
Test scores	Primary	1	0.011	0.827	0.011	0.052	10	0.007	0.057	17
Crime	Primary	1	0.000	0.999	0.000	0.127	10	0.000	0.127	20
K-12 grade repetition	Primary	1	-0.041	0.854	-0.041	0.224	10	-0.041	0.224	17
K-12 special education	Primary	1	-0.093	0.654	-0.093	0.208	10	-0.093	0.208	17
Years of education	Secondary	1	0.000	0.999	0.000	0.127	29	0.000	0.127	39
Earnings	Secondary	1	0.020	0.872	0.020	0.127	29	0.020	0.127	39
Employment	Secondary	1	0.000	0.999	0.000	0.127	29	0.000	0.127	39
Public assistance	Secondary	1	-0.073	0.634	-0.073	0.154	29	-0.073	0.154	39
Major depressive disorder	Secondary	1	-0.045	0.722	-0.045	0.127	29	-0.023	0.156	31
Substance abuse	Secondary	1	-0.008	0.976	-0.008	0.285	29	-0.008	0.285	39
High school grad via test scores	Primary	n/a	n/a	n/a	0.002	0.018	17	0.002	0.018	17

### Citations Used in the Meta-Analysis

Roggman, L. A., Boyce, L. K., & Cook, G. A. (2009). Keeping kids on track: Impacts of a parenting-focused early head start program on attachment security and cognitive development. *Early Education and Development*, 20(6), 920-941.

Vogel, C. A., Xue, Y., Moiduddin, E. M., Carlson, B. L., & Kisker, E. (2010). *Early Head Start children in grade 5: Long-term follow-up of the Early Head Start research and evaluation study sample* (Final Report) (Document No. PR10-61). Princeton, NJ: Mathematica Policy Research.

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